[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0032; Project Identifier AD-2020-01314-P; Amendment 39-22013; AD 2022-08-10]

RIN 2120-AA64

Airworthiness Directives; Hamilton Sundstrand Corporation Propellers

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2020-12-07 for certain Hamilton Sundstrand Corporation (Hamilton Sundstrand) 54H model propellers. AD 2020-12-07 required initial and repetitive eddy current inspections (ECI) of certain propeller blades and replacement of the propeller blades that fail the inspection. This AD was prompted by a report of the separation of a 54H60 model propeller blade installed on a United States Marine Corps Reserve (USMCR) KC-130T airplane during a flight in July 2017. This AD requires initial and repetitive ECI of all propeller blades installed on Hamilton Sundstrand 54H60 propeller hubs and replacement of any propeller blade that fails inspection. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Hamilton Sundstrand, 1 Hamilton Road, Windsor Locks, CT 06096-1010; phone: (877) 808-7575; email: CRC@collins.com. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue,

Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0032.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0032; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Michael Schwetz, Aviation Safety Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7761; fax: (781) 238-7199; email: 9-AVS-AIR-BACO-COS@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2020-12-07, Amendment 39-21142 (85 FR 36145, June 15, 2020), ("AD 2020-12-07"). AD 2020-12-07 applied to certain Hamilton Sundstrand 54H model propellers. Note that AD 2020-12-07 and the Hamilton Sundstrand service information reference 54H60 model propellers whereas this AD references 54H model propellers. Hamilton Sundstrand 54H60 model propellers are 54H model propellers with a 54H60 model propeller hub.

The NPRM published in the *Federal Register* on February 25, 2021 (86 FR 11473). The NPRM was prompted by a report of the separation of a 54H60 model propeller blade installed on a USMCR KC-130T airplane during a flight in July 2017. The USMCR investigation of this event revealed the Hamilton Sundstrand 54H60 model propeller blade separated due to corrosion pitting and a resultant intergranular radial crack that was not corrected at the last propeller overhaul. From this intergranular crack,

a fatigue crack initiated and grew under service loading until the Hamilton Sundstrand 54H60 model propeller blade could no longer sustain the applied loads and ultimately the blade separated. The separation of the blade resulted in the loss of the airplane and 17 fatalities. The investigation further revealed that 54H60 model propeller blades manufactured before 1971 are susceptible to cracks of the propeller blade in the area of the internal taper bore. The applicability of AD 2020-12-07 was therefore limited to those Hamilton Sundstrand 54H60 model propellers blades with a blade serial number (S/N) below 813320, which are those propeller blades manufactured before 1971.

Since the FAA issued AD 2020-12-07, the manufacturer determined that all propeller blades installed on Hamilton Sundstrand 54H model propellers with a 54H60 model propeller hub are susceptible to intergranular corrosion cracking in the blade taper bore. As a result, the manufacturer published Hamilton Sundstrand Alert Service Bulletin (ASB) 54H60-61-A154, Revision 1, dated May 29, 2020 (ASB 54H60-61-A154), to expand the effectivity to include propeller blades with a blade S/N below 813320, all propeller blades if the propeller contains a propeller blade with a blade S/N below 813320, and all propeller blades that have not been overhauled within ten years. ASB 54H60-61-A154 also provides instructions for concurrent compliance with Hamilton Sundstrand ASB 54H60-61-A155, dated May 29, 2020, to ECI an expanded and deeper taper bore area. In the NPRM, the FAA proposed to require initial and repetitive ECI of all propeller blades installed on Hamilton Sundstrand 54H60 propeller hubs and replacement of any propeller blade that fails inspection. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

The FAA received comments from one commenter, Lynden Air Cargo, LLC (LAC). The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Remove “All” from Proposed AD Requirements

LAC noted that the proposed AD used the word “all” in reference to propeller blades in the preamble of the NPRM. LAC stated that this AD should not apply to newly

manufactured (-2A) propeller blades because those propeller blades are manufactured with an enhanced process to reduce the risk of failure.

While the -2A propeller blades (P/Ns A7111D-2A and A7111E-2A) and overhauled blades (P/Ns A7111D-2A2, A7111D-2A3, A7111E-2A2, and A7111E-2A3) have an enhanced process and improved protection, these blades are still susceptible to cracking in the propeller blade taper bore. The unsafe condition is still under investigation by the manufacturer and, depending on the results of that investigation, the FAA may consider further rulemaking action. The FAA did not change this AD as a result of this comment.

Comment Concerning Estimated Costs and the Availability of Replacement Propeller Blades

LAC stated that it disagrees with the Estimated Costs section in the NPRM. LAC noted that the proposed AD underestimated the cost of compliance, and determined that the total costs associated with the performance of an ECI of all propeller blades installed on the propeller and reporting the ECI results for U.S. operators was approximately $1,948,280 per inspection interval. LAC used a labor rate of $130 per hour in its estimate, suggesting the FAA's estimated $85 per hour amount in the proposed AD was inaccurate. LAC also determined that the total compliance cost over the typical life of a new propeller (4 inspections) was $7,793,120 for propellers installed on aircraft of U.S. registry, not including lost revenue due to the aircraft being out of service. LAC provided a table within its comment, specifying LAC's breakdown of costs associated with complying with this AD. LAC also noted that Derco, the only supplier of new manufactured replacement propeller blades, was quoting $68,000 per blade, which was higher than the FAA's estimated $63,500 per blade, and would not guarantee or specify any delivery dates or quantities available.

The comments from LAC are addressed in paragraph 2 of the Regulatory Flexibility Determination of this AD. The FAA did not make any changes to this AD as a result of this comment.

Comment on Effect of AD on Small Entities

LAC noted that due to the small population of civil certified aircraft using the 54H model propellers, the proposed AD could be considered a significant regulatory action due to it being economically significant. LAC also noted that the proposed AD would have a significant economic impact on a substantial number of small entities because the majority of civil operators affected by the AD are categorized by the Small Business Administration (SBA) as small businesses, having fewer than 500 employees.

As set forth in this preamble, this AD is not a "significant regulatory action" under Executive Order 12866. Regarding LAC's comment on the economic impact to small entities, that comment is addressed in paragraph 2 of the Regulatory Flexibility Determination in the preamble of this AD. The FAA did not change this AD as a result of this comment.

Comment on Effect of AD on Intrastate Aviation in Alaska

LAC noted that the proposed AD would affect intrastate aviation in Alaska because LAC is based in Anchorage, Alaska and operates throughout the state.

The FAA disagrees. LAC did not include in its comment any information to suggest that performance of the ECI on the propeller blades would affect service to remote Alaskan communities that are not available by other modes of transportation, while LAC's airplanes are out of service for the ECI of the taper bore. The FAA has determined that this AD would not have a significant negative impact on the availability of transportation services to a remotely located Alaskan community that is not serviced by other modes of transportation. Even if this AD did have a significant negative impact on the availability of LAC's transportation services to a remotely located Alaskan community not serviced by other modes of transportation, the safety concerns explained in this AD outweigh the benefits of making said transportation available.

Comment on Determining Manufacture Date of Affected Propeller Blades

LAC commented that, in reference to "since new" used in paragraph (g)(3) of the Required Actions, LAC has been advised by Collins Aerospace that the date code method of assigning S/Ns for propeller blades was not in effect for propeller blades until the late 1990s. As a result, LAC commented, each S/N must be manually researched from hand written production records, and a quick reference S/N database is not available. LAC also

noted that this will make determining the blade date of manufacture problematic and time consuming.

The FAA acknowledges that the process to determine the propeller blade's date of manufacture may be time consuming. However, the FAA notes that paragraph (g)(3) of this AD assumes that a date record exists for each installed propeller blade that has been through overhaul activities because propeller maintenance records must comply with 14 CFR 43.11. The FAA did not change this AD as a result of this comment.

Request for Clarification on Installation Prohibition

LAC stated that, in reference to paragraph (h)(1) of the NPRM, Installation Prohibition, this AD should not apply to newly manufactured (-2A) propeller blades because those propeller blades are manufactured with an enhanced process to reduce the risk of failure. LAC also commented that paragraph (h)(2) of the NPRM, Installation Prohibition, would prohibit installation of a propeller blade unless that propeller blade has first passed the initial inspection required by paragraphs (g)(1) through (4) of this AD. LAC understood this installation prohibition to apply to propeller blades that were removed and installed for maintenance that is unrelated to the propeller blade inspection. LAC disagrees with the inclusion of this installation prohibition because propeller assemblies are routinely removed and replaced in the field for a variety of unrelated maintenance tasks where there may be limited tooling, propeller stands, or non-destructive test equipment. The added requirement to fully disassemble the propeller and inspect the blades before they are due for the initial inspection is an unnecessary burden on the operators, and logistically problematic.

The FAA disagrees with excluding newly manufactured propeller blades from the installation prohibition section of this AD for the same reasons explained in response to LAC's comment on excluding newly manufactured propeller blades from the applicability section of this AD. Regarding LAC's comment on removing and installing the propeller blade assembly for unrelated maintenance, the FAA agrees to clarify paragraph (h)(2) Installation Prohibition, of this AD to account for those circumstances. The FAA acknowledges that a propeller assembly may require specific maintenance activity to remove the propeller blade assembly and control assembly from the aircraft,

but not require the rotating barrel and propeller blade assembly to be disassembled or "split," where the propeller blades are not readily accessible for the inspection. The FAA added a note to paragraph (h)(2) of this AD clarifying that operators may install a propeller assembly with a propeller blade identified in paragraphs (g)(1) through (3) of this AD if the propeller blade assembly is not disassembled and the propeller blades are not yet due for an ECI as required by paragraphs (g)(1) through (4) of this AD.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adoption of the AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for the addition of a note to paragraph (h) Installation Prohibition, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information under 1 CFR Part 51

The FAA reviewed Hamilton Sundstrand ASB 54H60-61-A154, Revision 1, dated May 29, 2020. This ASB identifies the affected propeller models and specifies procedures for performing an ECI of the propeller blade taper bore.

The FAA also reviewed Hamilton Sundstrand ASB 54H60-61-A155, dated May 29, 2020. This ASB also identifies affected propeller models and specifies procedures for performing an expanded ECI of the propeller blade taper bore. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Interim Action

The FAA considers this AD to be an interim action. This unsafe condition is still under investigation by the manufacturer and, depending on the results of that investigation, the FAA may consider further rulemaking action.

Costs of Compliance

The FAA estimates that this AD affects 212 propellers installed on 53 aircraft of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
ECI all propeller blades installed on propeller	16 work-hours x $85 per hour = $1,360	$700	$2,060	$436,720
Report results of ECI	1 work-hour x $85 per hour = $85	$0	$85	$18,020

The FAA estimates the following costs to do any necessary replacement that would be required based on the results of the inspection. The agency has no way of determining the number of aircraft that might need this replacement:

On-condition costs

Action	Labor Cost	Parts Cost	Cost per product
Replace propeller blade	1 work-hour x $85 per hour = $85	$63,500	$63,585

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (Pub. L. 96-354) (RFA) establishes "as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation.

To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration." The RFA covers a wide-range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA.

The FAA published an Initial Regulatory Flexibility Analysis (IRFA) (86 FR 40376, July 28, 2021) for Docket No. FAA-2021-0032; Project Identifier AD-2020-01314-P to aid the public in commenting on the potential impacts to small entities. The

FAA considered the public comments in developing both the final rule and this Final Regulatory Flexibility Analysis (FRFA). A FRFA must contain the following:

(1) A statement of the need for, and objectives of, the rule;

(2) A statement of the significant issues raised by the public comments in response to the IRFA, a statement of the assessment of the agency of such issues, and a statement of any changes made in the final rule as a result of such comments;

(3) The response of the agency to any comments filed by the Chief Counsel for Advocacy of the SBA in response to the proposed rule, and a detailed statement of any change made in the final rule as a result of the comments;

(4) A description of and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available;

(5) A description of the projected reporting, recordkeeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record; and

(6) A description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

1. Need for and Objectives of the Rule

This AD was prompted by a report of the separation of a 54H60 model propeller blade installed on a USMCR KC-130T airplane during a flight in July 2017. It requires initial and repetitive ECIs of all propeller blades installed on Hamilton Sundstrand 54H model propellers with a propeller hub, model 54H60, installed. Additionally, this final rule AD requires replacement of any propeller blade that fails inspection. The FAA is issuing this AD to detect cracking in the propeller blade taper bore. The unsafe condition, if not addressed, could result in failure of the propeller blade, blade separation, and loss of the airplane.

The FAA's legal basis for this AD is discussed in detail under the "Authority for this Rulemaking" section.

2. Significant Issues Raised in Public Comments

The FAA published an IRFA for Docket No. FAA-2021-0032; Project Identifier AD-2020-01314-P and requested comments.

LAC commented that the proposed AD underestimated the cost of compliance, and determined that the true cost on U.S. operators will be approximately $1,948,280 per inspection interval. LAC also determined that the total compliance cost over the typical life of a new propeller (4 inspections) is expected to be $7,793,120, not including lost revenue due to the aircraft being out of service. LAC also noted that Derco, the only supplier of new manufactured replacement propeller blades, was currently quoting $68,000 per propeller blade, and would not guarantee or specify any delivery dates or quantities available.

The FAA disagrees with updating the estimated costs of this AD. The cost analysis in AD rulemaking actions typically includes only the costs associated with complying with the AD, and does not include secondary costs. The FAA's cost estimate includes the work hours and parts costs to inspect and replace the parts. Using the compliance cost estimate that LAC provided in its public comment to the proposed AD ($9,190 to inspect all propeller blades installed on each propeller, or $36,760 to inspect an airplane with four propellers), the FAA calculated the total compliance costs of this AD on 15 small businesses that own and operate 27 airplanes at $992,520 ($36,760 × 27). Eight small businesses that own and operate one airplane would incur $36,760. The compliance costs of one small entity with five airplanes would be $183,800. The average compliance costs of this AD on small entities would be $66,168 ($992,520/15).

The FAA estimated the revenue impact of complying with this AD's requirements on these 15 small entities would vary from under 1 percent (0.12 percent) of affected companies' annual revenues to approximately 2 percent (1.69 percent) of their annual revenues.

LAC also noted that the proposed AD will have a significant economic impact on a substantial number of small entities because the majority of civil operators affected by

this AD are categorized by the SBA as “Small Businesses” having fewer than 500 employees.

The FAA identified 33 airplanes with 54H model propellers having propeller hub, model 54H60, installed, that are owned and operated by 16 private entities and fall under the 481112 NAICS Code (Scheduled Freight Air Transportation) with a small business size standard of a maximum of 1,500 employees to be considered small business. Six of these 33 airplanes are registered to LAC, affiliated with the Lynden Incorporated, which, with 2,500 employees on its payroll, is not a small entity per the SBA definition. The FAA considered all other entities that own and operate similar airplanes as small entities since they all employ less than 1,500 employees. The FAA also estimated the revenue impact of complying with this AD's requirements would vary from under 1 percent (0.12 percent) of affected companies' annual revenues to approximately 2 percent (1.69 percent) of their annual revenues. The FAA determined that no changes are necessary to this AD as a result of these comments.

3. Response to SBA Comments

The Chief Counsel for Advocacy of the SBA did not file any comments in response to the proposed rule. Thus, the FAA did not make any changes to this AD.

4. Small Entities to Which the Rule Will Apply

FAA used the definition of small entities in the RFA for this analysis. The RFA defines small entities as small businesses, small governmental jurisdictions, or small organizations. In 5 U.S.C. section 601(3), the RFA defines "small business" to have the same meaning as “small business concern” under section 3 of the Small Business Act. The Small Business Act authorizes the SBA to define "small business" by issuing regulations.

SBA (2019) has established size standards for various types of economic activities, or industries, under the North American Industry Classification System (NAICS)[1]. These size standards generally define small businesses based on the number of employees or annual receipts.

---

[1] Small Business Administration (SBA). 2019. Table of Size Standards. Effective August 12, 2019. https://www.sba.gov/document/support--table-size-standards.

The FAA identified 53 airplanes with 54H model propellers having propeller hub, model 54H60, installed. These 53 airplanes are registered to 20 entities. Of these 53 airplanes, 20 are registered to United States Government entities, including the U.S. Customs and Border Protection, which operates 13 of these airplanes. The FAA determined that these government entities are not small businesses or other forms of small entity.

The remaining 33 airplanes are owned and operated by 16 private entities. All of these private entities fall under the 481112 NAICS Code (Scheduled Freight Air Transportation) with a small business size standard of a maximum of 1,500 employees to be considered small business.

Six of these 33 airplanes are registered to LAC, affiliated with the Lynden Incorporated, which, with 2,500 employees on its payroll, is not a small entity per the SBA definition. The FAA considered all other entities that own and operate similar airplanes as small entities since they all employ less than 1,500 employees. Therefore, the FAA estimated that this AD would impact 15 small entities.

5. Projected Reporting, Recordkeeping, and Other Compliance Requirements

Small entities will incur a new reporting requirement as a result of this AD. Results of the ECI required by paragraphs (g)(1) through (5) of this AD must be reported in accordance with the Accomplishment Instructions, paragraph 3.C.(6), of Hamilton Sundstrand ASB 54H60-61-A154, Revision 1, dated May 29, 2020. The FAA also estimated that there would be compliance costs due to the new requirements as discussed in this preamble.

Using the compliance cost estimate that LAC provided in its public comment to the proposed AD ($9,190 to inspect all propeller blades installed on each propeller, or $36,760 to inspect an airplane with four propellers), the total compliance costs of this AD on 15 small businesses that own and operate 27 airplanes would be $992,520 ($36,760 x 27). Eight small businesses that own and operate one airplane would incur $36,760. The compliance costs of one small entity with five airplanes would be $183,800. The average compliance costs of this AD on small entities would be $66,168 ($992,520 / 15).

The FAA estimated the revenue impact of complying with this AD's requirements on these 15 small entities would vary from under 1 percent (0.12 percent) of affected companies' annual revenues to approximately 2 percent (1.69 percent) of their annual revenues.

To the extent that small entities provide more unique services or serve markets with less competition, they may also be able to pass on costs in the form of price increases. However, the FAA assumed that none of these small entities would be able to pass these compliance costs to their customers in terms of higher prices.

6. Significant Alternatives Considered

As part of the FRFA, the FAA is required to consider regulatory alternatives that may be less burdensome.

The FAA did not find any significant regulatory alternatives that would still accomplish the safety objectives of this AD.

Regulatory Findings

The FAA has determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive 2020-12-07, Amendment 39-21142 (85 FR 36145, June 15, 2020); and

b. Adding the following new airworthiness directive:

2022-08-10 Hamilton Sundstrand Corporation: Amendment 39-22013; Docket No. FAA-2021-0032; Project Identifier AD-2020-01314-P.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2020-12-07, Amendment 39-21142 (85 FR 36145, June 15, 2020).

(c) Applicability

This AD applies to all Hamilton Sundstrand Corporation (Hamilton Sundstrand) 54H model propellers with a propeller hub, model 54H60, installed.

Note to paragraph (c): Hamilton Sundstrand references propeller model 54H60 in Hamilton Sundstrand Alert Service Bulletin (ASB) 54H60-61-A154, Revision 1, dated May 29, 2020. These are model 54H propellers with a 54H60 model propeller hub.

(d) Subject

Joint Aircraft System Component (JASC) Code 6111, Propeller Blade Section.

(e) Unsafe Condition

This AD was prompted by the separation of a propeller blade that resulted in the loss of an airplane and 17 fatalities. The FAA is issuing this AD to detect cracking in the propeller blade taper bore. The unsafe condition, if not addressed, could result in failure of the propeller blade, blade separation, and loss of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) For propellers with an installed propeller blade having a blade serial number (S/N) below 813320, that has not been overhauled within the past sixty (60) months, within one year or 500 flight hours (FHs) after July 20, 2020 (the effective date of AD 2020-12-07), whichever occurs first, perform an eddy current inspection (ECI) of all blades installed on the propeller.

(2) For propellers with an installed propeller blade having a blade S/N below 813320, that has been overhauled within the past sixty (60) months, within two years or 1,000 FHs after July 20, 2020 (the effective date of AD 2020-12-07), whichever occurs first, perform an ECI of all blades installed on the propeller.

(3) For propellers with an installed propeller blade, blade S/N 813320 and above, that has not been overhauled within ten years since new or since last overhaul, within one year or 500 FHs after the effective date of this AD, whichever occurs first, perform an ECI of all blades installed on the propeller.

(4) Perform the ECI of the propeller blades required by paragraphs (g)(1) through (3) of this AD in accordance with the Accomplishment Instructions, paragraph 3.C.(5), of both Hamilton Sundstrand ASB 54H60-61-A154, Revision 1, dated May 29, 2020, and of Hamilton Sundstrand ASB 54H60-61-A155, dated May 29, 2020.

(5) For all propellers identified in paragraphs (g)(1) through (3) of this AD, repeat the inspection required by paragraphs (g)(1) through (4) of this AD at intervals not exceeding 3 years or 1,500 FHs, whichever comes first, from the previous inspection.

(6) If a propeller blade fails any inspection required by this AD, based on the criteria in Accomplishment Instructions, paragraph 3.C.(5)(g) of Hamilton Sundstrand ASB 54H60-61-A154, Revision 1, dated May 29, 2020, and paragraph 3.C.(5)(j) of Hamilton Sundstrand ASB 54H60-61-A155, dated May 29, 2020, remove the blade from service before further flight and replace with a blade eligible for installation.

(7) Report the results of the ECI required by paragraphs (g)(1) through (5) of this AD in accordance with the Accomplishment Instructions, paragraph 3.C.(6), of Hamilton Sundstrand ASB 54H60-61-A154, Revision 1, dated May 29, 2020.

(h) Installation Prohibition

(1) After the effective date of this AD, do not install onto any propeller a Hamilton Sundstrand propeller blade identified in paragraphs (g)(1) through (3) of this AD, unless the blade has first passed the initial inspection required by paragraphs (g)(1) through (4) of this AD.

(2) After the effective date of this AD, do not install any propeller assembly with a propeller blade identified in paragraphs (g)(1) through (3) of this AD onto any aircraft unless the propeller blades have first passed the initial inspection required by paragraphs (g)(1) through (4) of this AD.

Note to paragraph (h)(2): Operators may install a propeller assembly with a propeller blade identified in paragraphs (g)(1) through (3) of this AD if the propeller blade assembly is not disassembled and the propeller blades are not yet due for an ECI as required by paragraphs (g)(1) through (4) of this AD.

(i) Credit for Previous Actions

You may take credit for the initial ECI of a propeller blade required by paragraphs (g)(1) and (2) of this AD and the replacement of a propeller blade required by paragraph (g)(6) of this AD if the actions were completed before the effective date of this AD using Hamilton Sundstrand ASB 54H60-61-A154, dated August 26, 2019.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Boston ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Related Information

For more information about this AD, contact Michael Schwetz, Aviation Safety Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7761; fax: (781) 238-7199; email: 9-AVS-AIR-BACO-COS@faa.gov.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Hamilton Sundstrand Alert Service Bulletin (ASB) 54H60-61-A154, Revision 1, dated May 29, 2020.

(ii) Hamilton Sundstrand ASB 54H60-61-A155, dated May 29, 2020.

(3) For service information identified in this AD, contact Hamilton Sundstrand, 1 Hamilton Road, Windsor Locks, CT 06096-1010; phone: (877) 808-7575; email: CRC@collins.com.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on April 7, 2022.

Ross Landes, Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2022-08539 Filed: 4/21/2022 8:45 am; Publication Date: 4/22/2022]